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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,522	11/14/2003	Krishnan Chari	85501KNM	9951
7590	11/17/2005		EXAMINER HAQ, SHAFIQU	
Paul A. Leipold Patent Legal Staff Eastman Kodak Company 343 State Street Rochester, NY 14650-2201			ART UNIT 1641	PAPER NUMBER

DATE MAILED: 11/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/713,522	Applicant(s) CHARI ET AL.	
	Examiner Shafiqul Haq	Art Unit 1641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/14/03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 12-33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/14/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-11, drawn to composition, classified in class 546 and subclass 163.
 - II. Claims 12-29, drawn to a microarray, classified in class 435, subclass 7.92.
 - III. Claims 30-31, drawn to a method of making a microarray, classified in class 427, subclass 2.13.
 - IV. Claim 32, drawn to a microsphere comprising a capsule containing a dye of formula (I), classified in class 427 and subclass 2.14.
 - V. Claim 33, drawn to a microsphere comprising a capsule containing a dye of formula (II), classified in class 427 and subclass 2.14

The above groups represent general areas wherein the inventions are independent and distinct, each from the other because of the following reasons:

2. Inventions of group I and group II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination (group II) does not require the particulars of microsphere dye of group I as evidenced by dye of formula (I) and formula (II) of claim 1 and 2 for patentability and the coating

composition (subcombination of group I) has separate utility such as a coating in printing media.

3. Inventions of group I and group IV are related as combination and subcombination.

Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, combination (group I) does not require the particulars of microsphere capsule of claim 32 of group IV as evidenced by dye of formula (II) of claim 33 for patentability and subcombination (group IV) have separate utility such as in printing media.

4. Inventions of group I and group V are related as combination and subcombination.

Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, combination (group I) does not require the particulars of microsphere capsule of claim 33 of group V as evidenced by dye of formula (I) of claim 32 for patentability and subcombination (group V) have separate utility such as in printing media.

5. Inventions of group II and group IV are related as combination and subcombination.

Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other

combinations (MPEP § 806.05(c)). In the instant case, combination (group II) does not require the particulars of microsphere capsule dye of claim 32 of group IV as evidenced by dye of formula (II) of claim 33 for patentability and subcombination (group IV) have separate utility such as in printing media.

6. Inventions of group II and group V are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, combination (group II) does not require the particulars of microsphere capsule dye of claim 33 of group V as evidenced by dye of formula (I) of claim 32 for patentability and subcombination (group V) have separate utility such as in printing media.
7. Inventions of each of groups I-II and IV-V are related to group III as product and process of making the product. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the composition (product) can be used in printing media.
8. Inventions of groups IV and V are unrelated and patentably distinct. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case, groups IV requires a dye of

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formula (I) whereas, group V requires a dye of formula (II) having different substitutions on aromatic ring.

9. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification requiring divergent searches in the patent and technical literature as well as different patentability considerations, restriction for examination purposes as indicated is proper.
10. All compounds falling outside the class(es) and subclass(es) of the selected compound and any other subclass encompassed by the election above will be directed to nonelected subject matter and will be withdrawn from consideration under 35 U.S.C. 121 and 37 C.F.R. 1.142(b). Applicant may reverse the right to file divisional applications on the remaining subject matter. (The provisions of 35 U.S.C. 121 applies with regard to double patenting covering divisional applications.)
11. The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and a product claim is subsequently found allowable, withdrawn process claims that depend from or otherwise include all the limitations of the allowable product claim will be rejoined in accordance with the provisions of M.P.E.P. §821.04. **Process claims that depend from or otherwise include all the limitations of the patentable product** will be entered as a matter of right if the amendment is presented prior to final rejection or allowance, whichever is earlier. Amendments submitted after final rejection are governed by 37 CFR 1.116; amendments submitted after allowance are governed by 37 CFR 1.312.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103, and 112. Until an elected product claim is found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowed product claim will not be rejoined. See "Guidance on Treatment of Product and Process Claims in light of *In re Ochiai*, *In re Brouwer* and 35 U.S.C. § 103(b)," 1184 O.G. 86 (March 26, 1996). Additionally, in order to retain the right to rejoinder in accordance with the above policy, Applicant is advised that the process claims should be amended during prosecution either to maintain dependency on the product claims or to otherwise include the limitations of the product claims. Failure to do so may result in a loss of the right to rejoinder.

Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See M.P.E.P. § 804.01.

12. During a telephone conversation with Kathleen Neuner Manne on 10/31/05 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-11. Affirmation of this election must be made by applicant in replying to this

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Office action. Claims 12-33 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

13. Applicant is reminded that upon cancellation of claims to a nonelected invention, the inventions must be amended in compliance with 37 C.F.R. 1.48(b) if one of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 C.F.R. 1.48(b) and by the fee required under 37 C.F.R. 1.17(i).

Specification

14. The disclosure is objected to because of the following informalities: Application serial Numbers in line 6 and 8 are missing.

Appropriate correction is required.

15. Fig. 1 is not properly labeled. Description of fig 1 (lines 19-21 of the specification) does not match with Fig. 1.

Information Disclosure Statement

16. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP j 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Claim Rejections - 35 USC § 112

17. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

18. Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

19. Claim 1 recites the term "precursor to a gelling agent". It is not clear what compound or compounds are encompassed by the term "precursor to a gelling agent" as the term is not clearly defined in the specification.

20. Claims 1, 2 and 6-9 recites the term "microspheres". The term "microsphere is not clearly defined in the specification and the chemical nature and structure of "microspheres" is not clear as well. Note that "microspheres" by definition are suspensions when dispersed in liquid (source: QTL biosystem).

21. Claims 1 and 2 recites the phrase "microspheres containing a dye". It is not clear whether the "dye" is attached, adsorbed or absorbed on or into the "microsphere".

Claim Rejections - 35 USC § 102

22. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

23. A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

24. Claims 1-3 and 9-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Chen et al (EP 1127707 A1).

Chen et al. disclose a coating composition comprising a dye-containing polymeric latex and gelling agent (e.g. gelatin) (see claims 1 and 5) and at least one of the

nickel metallized dye of the reference (see paragraph [0025]) anticipates the dyes (formula (I) and formula (II)) of present application.

As for claims 9-10, Chen et al. disclose the microspheres (polymeric latex) to be comprised of synthetic polymeric materials (paragraphs [0014-0016]).

With respect to the recitation "for making a protein microarray" in line 1 of claim 1, the recitation has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 195

Therefore, the reference is deemed to anticipate the cited claim.

25. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Evans et al (US 4420550).

Evans et al. disclose a coating composition comprising a dye-containing emulsion and gelling agent (e.g. gelatin) (column 2, lines 29-30 and column 28, lines 55-66) and at least one of the nickel metallized dye of the reference (columns 17-24) anticipates the dyes (formula (I) and formula (II)) of present application. As discussed in paragraph 19 above, "microspheres" by definition are suspensions when dispersed in liquid (source: QTL biosystem) and therefore, "emulsion" which is

a "suspension" of small globules on one liquid with which the first will not mix, fits the definition of "microspheres".

With respect to the recitation "for making a protein microarray" in line 1 of claim 1, the recitation has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 195

Therefore, the reference is deemed to anticipate the cited claim.

Claim Rejections - 35 USC § 103

26. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

27. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noonan et al. (US 5334575) in view of Evans et al. (US 4420550).

Noonan et al. disclose a coating composition comprising a gelling agent (e.g. gelatin) (column 2, lines 47-53) and microsphere (beads) containing a magenta dye (column 1, lines 5-7; column 6, lines 23-28, 63-65). As for claims 6-8, Noonan disclose that the beads size are approximately 0.1 to about 20um.

With respect to the recitation "for making a protein microarray" in line 1 of claim 1, the recitation has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 195).

Noonan et al. disclose magenta dye but fail to disclose nickel metallized dye of formula (I) and formula (II) of present application.

Evans et al. as discussed in paragraph 24 above, disclose a coating composition comprising magenta dye of formula (I) and (II) of present application. Evans et al. also disclose that the metallized dye have less unwanted absorption than other metallizable dyes (column 1, lines 30-35).

Therefore, given the above fact that magenta dye of present application (formula I and II) is known in the art as coating composition and is useful for its less absorptive properties, it would have been obvious at the time of the invention to a person of ordinary skill in the art to substitute equivalent magenta dye of Evans et al in the coating composition of Noonan et al, with the expectation of obtaining a similarly useful dye-coating composition.

28. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being obvious over Qiao et al. (US 5334575) in view of Evans et al. (US 4420550).

The applied reference has a common inventors with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Qiao et al disclose a microarray coating composition comprising a gelling agent (column 3, lines 2-5 and column 4, lines 20-41) and microsphere (beads) containing a magenta dye (column 4, lines 42-63 and column 9, lines 27-33). As for claims 6-8, Qiao et al disclose beads size of 1 to 50 microns (column 6, lines 19-25) and as for claims 9-11, Qiao et al disclose the beads comprising polystyrene (column 9, lines 6-11).

With respect to the recitation "for making a protein microarray" in line 1 of claim 1, the recitation has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 195).

Qiao et al disclose magenta dye but fail to disclose nickel metallized dye of formula (I) and formula (II) of present application.

Evans et al. as discussed in paragraph 24 above, disclose a coating composition comprising magenta dye of formula (I) and (II) of present application. Evans et al. also disclose that the metallized dye have less unwanted absorption than other metallizable dyes (column 1, lines 30-35).

Therefore, given the above fact that magenta dye of present application (formula I and II) is known in the art as coating composition and is useful for its less absorptive properties, it would have been obvious at the time of the invention to a person of ordinary skill in the art to substitute equivalent magenta dye of Evans et al in the coating composition of Qiao et al, with the expectation of obtaining a similarly useful microarray coating composition.

29. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being obvious over Qiao et al. (US 2003/0224361 A1) in view of Evans et al. (US 4420550).

The applied reference has a common inventors with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Qiao et al disclose a microarray coating composition comprising a gelling agent and microsphere (beads) (see abstract and paragraphs [0027 and 0040] and claims 1-14) containing a magenta dye (paragraph [0040]). As for claims 6-8, Qiao et al disclose beads size of 1 to 50 microns (paragraph [0033]) and as for claims 9-11, Qiao et al disclose the beads comprising polystyrene (paragraph [0039])

With respect to the recitation "for making a protein microarray" in line 1 of claim 1, the recitation has not been given patentable weight because the recitation occurs

in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 195).

Qiao et al disclose magenta dye but fail to disclose nickel metallized dye of formula (I) and formula (II) of present application.

Evans et al. as discussed in paragraph 24 above, disclose a coating composition comprising magenta dye of formula (I) and (II) of present application. Evans et al. also disclose that the metallized dye have less unwanted absorption than other metallizable dyes (column 1, lines 30-35).

Therefore, given the above fact that magenta dye of present application (formula I and II) is known in the art as coating composition and is useful for its less absorptive properties, it would have been obvious at the time of the invention to a person of ordinary skill in the art to substitute equivalent magenta dye of Evans et al in the coating composition of Qiao et al, with the expectation of obtaining a similarly useful microarray coating composition.

Conclusion


30. No claims are allowed.

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31. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shafiqul Haq whose telephone number is 571-272-6103. The examiner can normally be reached on 7:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long V. Le can be reached on 571-272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


SHAFIQUL HAQ
EXAMINER
ART UNIT 1641

LONG V. LE
SUPERVISORY PATENT EXAMINER
ART UNIT 1641